

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) An apparatus that gathers information related to television viewing habits, comprising:

a first processor that provides information related to which television programming was viewed;

a first memory coupled to the first processor that stores the information;

a second processor that receives the information from the first memory and arranges the information as programs watched data; and

a second memory coupled to the second processor that stores the programs watched data as a programs watched matrix.

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Claim 2. (Currently Amended) The apparatus of claim 1, wherein the information includes date and time information, and program information. ~~and wherein the programs watched data is stored as a programs watched matrix.~~

Claim 3. (Original) The apparatus of claim 2, wherein the program information includes one or more of program category, program title information, and program duration.

Claim 4. (Original) The apparatus of claim 3, wherein the program category includes one or more of sports, movies, children's shows, news shows and pay-for-view events, and wherein the date and time information is the date and time the program was viewed.

Claim 5. (Original) The apparatus of claim 3, wherein the programs watched matrix includes columns and rows, the columns listing the time and date information and the rows listing the program information.

Claim 6. (Original) The apparatus of claim 5, wherein the time and date information is listed in blocks of four hours.

Claim 7. (Original) The apparatus of claim 1, wherein the information is provided from a plurality of set top terminals that receive programming from a television delivery system, and wherein each of the plurality of set top terminals is identified by a unique identification number.

Claim 8. (Original) The apparatus of claim 7, wherein each particular set top terminal has an associated programs watched matrix, and programs watched data for a particular set top terminal is arranged in the associated programs watched matrix.

Claim 9. (Original) The apparatus of claim 8, wherein as additional television programming is viewed, the programs watched matrix for the set top terminal is updated.

Claim 10. (Original) The apparatus of claim 1, wherein the first processor and the first memory are contained in a set top terminal.

Claim 11. (Original) The apparatus of claim 1, wherein the second processor and the second memory are contained in a cable television headend.

Claim 12. (Original) The apparatus of claim 1, wherein the second processor and the second memory are contained in an operations center.

Claim 13. (Original) The apparatus of claim 1, wherein the second processor and the second memory are contained in a set top terminal.

Claim 14. (Original) The apparatus of claim 1, wherein the second processor obtains the information by sending a polling message to a set top terminal connected to the second processor, the set top terminal, in response to the polling message, sending the information to the second processor.

Claim 15. (Currently Amended) An apparatus that gathers programs watched data, comprising:

a plurality of terminals connected to corresponding televisions and to a television program delivery system, each of the terminals including a memory that stores program access information; and

a receiver coupled to the plurality of terminals, the receiver receiving the program access information, wherein the program access information is stored as programs watched data in a programs watched matrix.

Claim 16. (Original) The apparatus of claim 15, wherein the programs watched data is stored in a programs watched matrix, each of the terminals being assigned a unique programs watched matrix.

Claim 17. (Original) The apparatus of claim 16, wherein each of the terminals is assigned a unique address used to identify the terminal and the associated programs watched matrix.

Claim 18. (Original) The apparatus of claim 16, wherein each of the terminals is assigned a group identification, the group identification common to at least two terminals.

Claim 19. (Original) The apparatus of claim 16, wherein the programs watched matrix includes time of day a program is watched and a program category for the program.

Claim 20. (Original) The apparatus of claim 19, wherein the program categories include one or more of children's programs, news programs, sports programs, pay-for-view, and movies.

Claim 21. (Original) The apparatus of claim 16, wherein the programs watched matrix includes a time of day a program is watched and a program title.

Claim 22. (Original) The apparatus of claim 16, wherein the unique programs watched matrix is updated as additional program access information is provided by the associated terminal.

Claim 23. (Original) The apparatus of claim 22, wherein the programs watched data is recorded as counts, the counts corresponding to the number of times a program category is watched at the associated terminal.

Claim 24. (Original) The apparatus of claim 15, further comprising a plurality of databases, wherein each of the plurality of databases receives information from programs watched matrices, the information including the terminal address, group identifier, and program counts, the databases including one or more of viewer profile, account billing, program scheduling and advertisement scheduling databases.

Claim 25. (Original) The apparatus of claim 15, further comprising a controller in the television program delivery system, the controller coupled to the plurality of terminals, the controller issuing a message directing each of the terminals to provide the program access information, wherein the message is a polling request message, the polling request message sent over one of a cable television cable and a telephone line and a response message is returned over one of the cable television cable and the telephone line.

Claim 26. (Original) The apparatus of claim 25, wherein the polling request message is a cyclic polling message, and wherein the cyclic polling message is one of roll-call polling, hub polling and token-passing polling.

Claim 27. (Original) The apparatus of claim 25, wherein the program access information is provided in the response message, the response message including:

- a leading flag;
 - an address field including the address of the terminal;
 - a subscriber region designation that includes a geographical region in which the terminal is located;
 - a terminal identifier that uniquely identifies the terminal;
 - an information field that includes a command to provide the program access information;
- and
- a trailing flag.

Claim 28. (Original) The apparatus of claim 25, wherein the plurality of terminals provide the program access information using a random access method.

Claim 29. (Original) The apparatus of claim 25, wherein the controller is located in a cable headend of the television program delivery system.

Claim 30. (Original) The apparatus of claim 25, wherein the controller is located in an operations center of the television program delivery system.

Claim 31. (Original) The apparatus of claim 15, wherein individual terminals are grouped in one of a plurality of terminal groups, and wherein the programs watched data is stored as group programs watched data.

Claim 32. (Original) A system that gathers programs watched data in a broadcast television delivery system, comprising:

means for gathering programs watched data from one or more set top terminals in a broadcast television delivery system;

a databases that stores the gathered programs watched data;

means for accessing the stored programs watched data;

means for counting the accessed programs watched data to determine programs watched counts corresponding to the frequency of programs watched by the one or more set top terminals in the broadcast television delivery system, wherein the programs watched counts are arranged in at least one programs watched matrix;

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means for creating set top terminal group information indicating a group assignment for a set top terminal by correlating the programs watched counts with categories of videos, wherein the video categories include videos available for sending to the set top terminal; and

means for transmitting the set top terminal group information to the set top terminal in a control information stream that instructs the set top terminal in selecting the videos for display.

Claim 33. (Original) The system of claim 32, further comprising:

means for extracting data from an information field of a program control information signal, wherein the extracted data includes program information;

means for creating a polling request message that directs a set top terminal to initiate transmission of a set top terminal status reports;

means for processing the received set top terminal status reports to produce polling response data; and

means for integrating the polling response data with the extracted data from the information field of the program control information signal.

Claim 34. (Original) The system of claim 33, wherein the creating means comprises:

means for reading database files using the access means, wherein the database files are relationally keyed to one another through a set of set top terminal identification numbers individually unique to a particular set top terminal;

means for formatting the polling request message, wherein the formatted polling request message includes at least one set top terminal identification number; and

means for enabling at least one polling command bit in the formatted polling request message, wherein the enabled polling command bit commands transmission of the set top terminal status reports.

Claim 35. (Original) The system of claim 33, wherein the processing means comprises:

control receiving means for demodulating the received set top terminal status reports;

means for reading at least one information field in the received set top terminal status reports, wherein the information field includes the programs watched data;

means for sorting the information fields in the received set top terminal status reports by a set top terminal identification number; and

temporary memory means for accumulating the sorted information fields for the set top terminals, wherein the accumulated sorted information fields produce the polling response data.

Claim 36. (Original) The system of claim 35, further comprising connection means for linking the processing means to the database, wherein the polling response data may be stored in the database, updating the programs watched matrix.

Claim 37. (Original) The system of claim 35, wherein the control receiving means comprises a Radio Frequency demodulator for receiving upstream data transmissions from the set top terminals.

Claim 38. (Original) The system of claim 35, wherein the control receiving means comprises a telephone for receiving data transmissions from the set top terminals over telephone lines.

Claim 39. (Original) An apparatus for use in a cable television program delivery system, the cable television delivery system coupled to one or more set top terminals, the one or more set top terminals capable of generating programs watched data, the apparatus comprising:

means for gathering programs watched data for a set top terminal;

means for storing the gathered programs watched data in at least one database;

means for accessing the stored programs watched data; and

means for counting the accessed programs watched data to determine the frequency of programs watched by the top terminal, wherein the programs watched counts are arranged by program category and time.

Claim 40. (Original) The apparatus of claim 39, further comprising:

means for creating set top terminal group information indicating a group assignment for the set top terminals; and

means for transmitting the set top terminal group information to the set top terminals in a control information stream capable of polling the set top terminals, and wherein the gathering means comprises:

means for generating a polling request message that directs the set top terminals to initiate transmission of a set top terminal status report;

means for receiving the set top terminal status report, wherein the received set top terminal status report contains programs watched information;

means for processing the received set top terminal status reports to produce polling response data; and

means for storing the polling response data.

Claim 41. (Original) The apparatus of claim 40, wherein the processing means comprises:

means for demodulating the received set top terminal status report;

means for reading at least one information field in the demodulated set top data, wherein the at least one information field is appended to a set top terminal identification number field;

means for sorting the at least one information field in received set top terminal status reports by set top terminal identification number; and

memory means for accumulating the sorted information fields for the at least one set top terminal, wherein the accumulated sorted information fields produce the polling response data.

Claim 42. (Original) The apparatus of claim 40, further comprising means for updating the programs watched data in the storing means with the polling response data, and wherein the counting means comprises:

means for reading the programs watched counts, wherein a separate programs watched count is assigned to different time slots in a day for a program category; and

means for sorting the programs watched counts from highest to lowest.

Claim 43. (Original) An apparatus that gathers programs watched information from set top terminals in a broadcast television program delivery system, comprising:

means for gathering the programs watched information;

means for storing the gathered programs watched information;

means for sorting the stored programs watched information by a plurality of program categories; and

means for ranking the plurality of program categories by frequency of programs watched in each category, wherein program categories with more programs watched are ranked higher than program categories with fewer programs watched.

Claim 44. (Original) The apparatus of claim 43, wherein the set top terminals have the capability of receiving polling request messages and transmitting polling responses, the polling responses including the programs watched information, and wherein the gathering means comprises:

means for generating the polling request messages, wherein the polling request messages are transmitted to the set top terminals, requesting the set top terminals to return the polling responses;

a receiver that receives the polling responses from the set top terminals; and
means for processing the received polling responses, wherein data on the programs watched information for the set top terminals is extracted and stored.

Claim 45. (Original) The apparatus of claim 43, wherein the gathered programs watched information has been previously stored in the storing means, and wherein the gathering means comprises means for updating the programs watched information in the storing means using the extracted data.

Claim 46. (Original) The apparatus of claim 43, wherein the set top terminals transmit the programs watched information using CSMA/CD protocols.

Claim 47. (Original) The apparatus of claim 43, wherein the programs watched information is transmitted over a cable television cable.

Claim 48. (Original) The apparatus of claim 43, wherein the programs watched information is transmitted over a telephone line.

Claim 49. (Original) A method for gathering programs watched information, comprising:

gathering programs watched data for set top terminals in a broadcast television program delivery system;

storing the gathered programs watched data in a database;

accessing the stored programs watched data; and

counting the accessed programs watched data to determine the frequency of programs watched by the set top terminals, wherein programs watched counts are arranged in a programs watched matrix.

Claim 50. (Original) The method of claim 49, wherein the set top terminals transmit set top terminal status reports in response to a polling request message produced using a program control information signal, further comprising:

creating the polling request message;

transmitting the polling request message to the set top terminals, wherein the polling request message directs set top terminals to initiate upstream data transmission of the set top terminal status reports over a cable distribution network; and

receiving the set top terminal status reports, wherein the set top terminal status reports include the programs watched data.

Claim 51. (Original) A processor in a cable television program delivery system, the delivery system providing programming to subscriber terminals, comprising:

- means for gathering programs watched data for the terminals;
- a database that stores the gathered programs watched data;
- means for accessing the stored programs watched data; and
- means for counting the accessed programs watched data to determine the frequency of programs watched at the terminals, wherein programs watched counts are arranged in a programs watched matrix.

Claim 52. (Original) The processor of claim 51, further comprising:

- means for creating terminal group information indicating group assignments for the terminals by correlating the programs watched counts with categories of data, wherein the data categories include demographic data, and wherein the data categories are available for providing programming to the terminals; and

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- means for transmitting the terminal group information to the terminals in a control information stream that instructs the terminals in selecting the programming, wherein the processor polls the terminals to direct the terminals to provide the programs watched data.

Claim 53. (Original) The processor of claim 52, wherein the gathering means comprises:

- means for generating a polling request message that directs the terminals to initiate transmission of terminal status reports;

- a receiver that receives the terminal status reports, wherein the received set terminal status reports contain programs watched information;

- means for processing the received terminal status reports to produce polling response data; and

- a memory that stores the polling response data.

Claim 54. (Original) The processor of claim 53, wherein the processing means comprises:

- a demodulator that demodulates the received terminal status reports;

- means for reading information fields in the demodulated terminal data, wherein the information fields are appended to terminal identification number fields;

means for sorting the information fields in the received terminal status reports by terminal identification number; and

a temporary memory that accumulates the sorted information fields for the terminals, wherein the accumulated sorted information fields produce the polling response data.

Claim 55. (Original) The processor of claim 53, further comprising means for updating the programs watched data in the database with the polling response data.

Claim 56. (Original) The processor of claim 53, wherein the counting means comprises:
means for reading the programs watched counts, wherein a separate programs watched count is assigned to different time slots in a day for each program category;
means for sorting the programs watched counts from highest to lowest; and
means for matching the sorted programs watched counts with the programs categories, wherein counts of the programs categories are thereby produced.

Claim 57. (Original) The processor of claim 56, further comprising:
means for sorting the stored programs watched information by a plurality of program categories;
means for ranking the plurality of program categories by frequency of programs watched in each category, wherein program categories with more programs watched are ranked higher than program categories with less programs watched;
means for selecting a set of highest ranked targeted program categories;
means for choosing individual programs from the set of highest ranked programs categories;

means for packaging the chosen individual programs for transmission to the terminals for display, wherein packages of programs are produced; and

means for transmitting the packages of programs to the terminals over the cable television delivery system.

Claim 58. (Original) The processor of claim 57, wherein the terminals have the capability of receiving polling request messages and transmitting polling responses upstream over one of a cable television a cable distribution network in the cable television program delivery system and a telephone line, the polling responses including the programs watched information.

Claim 59. (Original) A method for accumulating data in a cable television delivery system from a plurality of set top terminals in a cable television delivery system, comprising:
gathering programs watched data for the set top terminals;
storing the gathered programs watched data in a database;
accessing the stored programs watched data;
counting the accessed programs watched data to determine a frequency of programs watched at the set top terminals, wherein programs watched counts are arranged in a programs watched matrix.

Claim 60. (Currently Amended) A method of gathering programs watched information from a set top terminal that acquires programs from a programming source, comprising:
receiving a plurality of programs at the set top terminal;
selecting a program at the set top terminal from the plurality of programs;
monitoring the program selected at the set top terminal;
generating programs watched information relating to the selected program; ~~and~~
storing the generated programs watched information;
accessing the stored programs watched data; and
arranging the accessed programs watched data in at least one programs watched matrix,
wherein one of the at least one programs watched matrices includes time slots and program categories.

Claim 61. (Original) The method of claim 60, wherein the steps of monitoring, generating, and storing occur in a card that receives signals from the set top terminal, and wherein the method further comprises the step of transferring signals from the set top terminal to the card.

Claim 62. (Original) The method of claim 60, wherein the steps of monitoring, generating and storing occur in a network controller coupled to the set top terminals, and wherein the method further comprises the step of transferring signals from the set top terminal to the network controller.

Claim 63. (Original) The method of claim 62, wherein the network controller is located at a cable television headend.

Claim 64. (Original) The method of claim 62, wherein the network controller is located at an operations center.

Claim 65. (Cancelled)

Claim 66. (Withdrawn) A menu-driven cable television selection system, comprising:
an operations center that creates a television program lineup and generates a program control information signal, including television program lineup data, and computes program instructions, wherein the television program lineup, the program instructions and the program control information signal are transmitted to a plurality of subscriber locations;

a first processor that monitors and controls set top terminals at the plurality of subscriber locations;

a set top terminal that receives the television program lineups and the program control information signal, comprising:

selection means comprising:

a memory that stores computer program instructions,

a second processor connected to the memory that sequences through the program instructions and transforms the program control information signal into menus to be generated and displayed on the television utilizing the sequenced program instructions and the data carried by the program control information signal, and

a subscriber interface, connected to the processor, that provides a means for choosing options from the displayed menus, and wherein the chosen option affects the sequencing of the computer program instructions by the processor;
means for extracting data from the program control information signal;
means for compiling programs watched data using the chosen options that correspond to the selecting of one of the plurality of television programs offered from the television program lineups transmitted to the set top terminal; and

means for reporting the compiled programs watched data; and wherein the first processor further includes:

means for gathering the compiled programs watched data reported from the plurality of subscriber locations.

Claim 67. (Withdrawn) The system of claim 66, wherein the data on the program control information signal is modified using network control data to produce a modified program control information signal, and wherein the first processor further comprises:

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means for storing the network control data;

means for interpreting data from the program control information signal to determine program identities and menu locations;

means for modifying the interpreted database on the stored network control data; and

means for creating the modified program control information signal based on the modified interpreted data.

Claim 68. (Withdrawn) The system of claim 66, wherein the subscriber locations are polled for the compiled programs watched data, and wherein the gathering means comprises:

means for creating a polling request message that requests the reporting means to send the programs watched data; and

means for data processing the reported programs watched data.

Claim 69. (Withdrawn) The system of claim 68, wherein the data processing means comprises:

means for storing the reported programs watched data to produce stored programs watched data;

means for accessing the stored programs watched data; and

means for determining programs most frequently watched based on the stored programs watched data.

Claim 70. (Withdrawn) The system of claim 68, wherein the polling request message is a cyclic polling message, and wherein a response message, including the programs watched data, is sent over one of a cable television cable and a telephone cable.

Claim 71. (Withdrawn) A method for offering a plurality of television programs for selection by a subscriber in a television program delivery system, comprising:

creating a plurality of television program lineups;

generating a program control information signal carrying program data, wherein the plurality of television program lineups and the program control information signal are transmitted to set top terminals at subscriber locations;

distributing a plurality of television program lineups and the program control information signal to the set top terminals, wherein the set top terminals include computer program instructions that create program menus;

monitoring and controlling the set top terminals;

storing the plurality of television program lineups;
sequencing the stored computer program instructions to generate and display the menus, wherein the sequencing uses the programming data carried by the program control information signal;
choosing one of the options on the menus, wherein the chosen option effects the sequencing of the computer program instructions by the sequencing step;
compiling programs watched data using the chosen options that correspond to the selecting of one of the plurality of television programs offered;
reporting the compiled programs watched data from the set top terminals; and
gathering the compiled programs watched data reported from the set top terminals.

Claim 72. (Withdrawn) A television system that receives and stores data related to television viewing habits at a set top terminal, comprising;

a receiver operably connected to the set top terminal, the receiver receiving programs watched information from the set top terminal;

a processor coupled to the receiver, the processor processing the programs watched information to generate a programs watched matrix; and

a database coupled to the processor that stores the programs watched matrix, wherein the processor is capable of intelligent selection of programs to be sent to the set top terminal.

Claim 73. (Withdrawn) The system of claim 72, wherein the received and stored data includes demographic data.

Claim 74. (Withdrawn) The system of claim 72, wherein the programs watched information is maintained in programs watched matrix by time and program category such that a most frequently watched program category can be determined for a given time.

Claim 75. (Withdrawn) The system of claim 74, further comprising a database program, wherein programs are stored for intelligent selection based on program category.

Claim 76. (Withdrawn) The system of claim 75, wherein the program database includes an advertisement database, wherein the programs include advertisements, and wherein the advertisements are stored in the advertisement database for intelligent selection based on program category.

Claim 77. (Withdrawn) The system of claim 75, wherein the database includes a television program database, and wherein the programs include the television programs stored in television program database for intelligent selection based on program categories.

Claim 78. (Withdrawn) The system of claim 72, wherein programs watched information is maintained for groups of set top terminals, the groups including one or more set top terminals so that a most frequently watched program category can be determined for a given time slot for the groups, and wherein the programs watched information is maintained in a program watched matrix by time and program category.

Claim 79. (Withdrawn) The system of claim 73, wherein the processor accesses the demographic data that is provided by the set top terminal, stores the accessed demographic data in a viewer profile database, and weights the demographic data for the set top terminal, wherein the weights may be used in producing the determined program category.

Claim 80. (Withdrawn) The system of claim 73, wherein the processor accesses group demographic data that is maintained for a group of set top terminals, the groups including one or more set top terminals, wherein the group demographic data is maintained in a group profile database, and wherein the controller weights the group demographic data, the weights being used in producing the determined program category.

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Claim 81. (Withdrawn) A system for providing programming in a telecommunications network, comprising:

a terminal that gathers program data from a subscriber;

a first processor, operably connected to the terminal, the first processor analyzing the gathered program data to determine the frequency of programs watched by the subscriber and correlating the analyzed program data with categories of programs, wherein each program category includes at least one program;

a second processor that selects a program from the correlated program categories; and

a transmitter coupled to the second processor and the terminal, the transmitter transmitting the selected program to the terminal.

Claim 82. (Withdrawn) The system of claim 81, further comprising a display that displays the transmitted program.

Claim 83. (Withdrawn) The system of claim 82, wherein the display displays a menu of the selected programs from which a subscriber chooses a program to watch.

Claim 84. (Withdrawn) The system of claim 81, wherein the terminal and the first processor are located in the set top box coupled to a television.

Claim 85. (Withdrawn) The system of claim 81, wherein the terminal and the first processor are located at a site remote from the set top terminal.

Claim 86. (Withdrawn) The system of claim 85, wherein the site is a cable television headend, and wherein the telecommunications network is a cable television program delivery system.

Claim 87. (Withdrawn) The system of claim 85, wherein the site is an operations center, and wherein the telecommunications network is a cable television delivery system.

Claim 88. (Withdrawn) The system of claim 81, wherein the program data is programs watched data and wherein the first processor arranges the programs watched data in at least one programs watched matrix and counts the programs watched data to determine the frequency of programs watched.

Claim 89. (Withdrawn) The system of claim 88, wherein the programs watched matrix is arranged by program category and time slot and wherein the first processor reads the programs watched matrix to determine programs watched counts and sorts the programs watched counts within a time slot from highest to lowest counts.

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Claim 90. (Withdrawn) The system of claim 81, wherein the transmitter transmits the selected programs on a television channel, and the terminal is capable of changing television channels.

Claim 91. (Withdrawn) The system of claim 81, wherein the first processor selects a plurality of programs, and the transmitter transmits the selected programs on a single television channel, and wherein the terminal is capable of masking undesired programs.

Claim 92. (Withdrawn) The system of claim 81, wherein the program categories include advertisement categories, each advertisement category including at least one advertisement, and wherein the second processor selects a plurality of advertisements from the advertisement categories, and the transmitter transmits the selected advertisements on a single television channel.

Claim 93. (Withdrawn) The system of claim 92, wherein at least one advertisement within an advertisement category is an infomercial.

Claim 94. (Withdrawn) The system of claim 92, wherein at least one advertisement within an advertisement category is a promotion.

Claim 95. (Withdrawn) The system of claim 91, wherein the second processor polls the terminals to monitor the current program being watched for the occurrence of commercial breaks, and wherein the transmitter transmits the selected advertisements in response to the occurrence of the commercial breaks determined by the second processor.

Claim 96. (Withdrawn) The system of claim 81, wherein the terminal comprises a memory that stores programs watched data, the system further comprising a receiver operably coupled to the first processor that receives the stored programs watched data from the terminal.

Claim 97. (Withdrawn) The system of claim 96, wherein the second processor polls the terminal and wherein the receiver receives status reports sent by the terminal, the receiver further comprising:

a second memory that stores the programs watched data;

a message generator that generates a polling request message, the message directing the terminal to initiate transmission of the terminal status reports, the terminal status reports containing programs watched information, wherein the first processor processes the received terminal status reports to produce polling response data and the second memory stores the polling response data.

Claim 98. (Withdrawn) The system of claim 96, wherein the terminal transmits a terminal status report that contains the programs watched data to the receiver using a random access method.

Claim 99. (Withdrawn) The system of claim 98, wherein the random access method further comprises a CDMA/CD protocol.

Claim 100. (Withdrawn) The system of claim 96, wherein the terminal transmits a terminal status report that contains the programs watched data to the receiver using a standard telephone line.

Claim 101. (Withdrawn) The system of claim 97, the first processor further comprising a demodulator that demodulates the received terminal status reports, wherein the first processor:
reads at least one information field in the demodulated terminal data;
appends each information field to a terminal identification number field; and

sorts each information field in the received terminal status reports by terminal identification number, and wherein the second memory accumulates the sorted information fields for each terminal, the first processor using the accumulated sorted information fields to produce the polling response data.

Claim 102. (Withdrawn) The system of claim 101, wherein the first processor updates the programs watched data in the second memory with the polling response data.

Claim 103. (Withdrawn) The system of claim 81, wherein the first processor gathers demographic data from subscribers and correlates the demographic data with the categories of programs.

Claim 104. (Withdrawn) The system of claim 103, wherein a group of subscribers forms a statistically significant number of subscribers, and the first processor uses both the gathered demographic data and simulated demographic profiles as the demographic data, and wherein the first processor:

gathers demographic data from the statistically significant group of subscribers; and generates a simulated demographic profile of the subscribers to be simulated by comparing the programs watched data of the subscribers to be simulated with the gathered demographic data and the programs watched data of the statistically significant group of subscribers.

Claim 105. (Withdrawn) The system of claim 81, wherein the terminal is located in the set top box and the first processor is located at a site remote from the set top box.

Claim 106. (Withdrawn) The system of claim 105, wherein the site is a cable television headend.

Claim 107. (Withdrawn) The system of claim 106, wherein the site is an operations center.

Claim 108. (Withdrawn) The system of claim 81, wherein the terminal gather programs watched data from a plurality of subscribers, wherein the first processor processes the programs watched data gathered from the plurality of subscribers, and wherein the transmitter transmits the selected programs to the plurality of subscribers.

Claim 109. (Withdrawn) A method for determining program ratings at an operations center using set top terminals, comprising:

receiving programs watched information from the set top terminals in an upstream data transmission at a cable television headend;

transmitting the programs watched information from the cable television headend to the operations center;

gathering the transmitted programs watched information from the set top terminals to form a database of program watched information at the operations center; and

calculating program ratings, wherein the program ratings are calculated using the programs watched database.

Claim 110. (Withdrawn) An apparatus for creating a program line-up targeted to a subscriber, wherein data on programs watched is used to determine the subscriber's preferences, comprising:

a receiver that gathers programs watched data from the subscriber to be targeted;
a first processor coupled to the receiver that analyzes programs watched data;
a second processor that develops a program line-up based on the analyzed data; and
a transmitter, operably connected to the second processor that transmits the program line-up to the subscriber.

Claim 111. (Withdrawn) The apparatus of claim 107, wherein the first processor gathers marketing data and the second processor analyzes the marketing data.

Claim 112. (Withdrawn) A cable headend that targets programs, comprising:
a receiver that gathers programs watched data from a subscriber;
a processor coupled to the receiver, the processor analyzing the programs watched data to determine viewing habits of the subscriber;

a control device operable to select a program based on the analyzed data;
a memory, operably connected to the processor, wherein the selected program is stored.

Claim 113. (Withdrawn) The apparatus of claim 112, further comprising:
a display, operably connected to the processor, that displays the selected program to the subscriber.

Claim 114. (Withdrawn) An apparatus for targeting video, wherein data on programs watched is used to determine a subscriber's preference, comprising:

a receiver that gathers programs watched data from a subscriber;

a first processor, operably connected to the receiver, that analyzes the gathered programs watched data to determine the subscriber's preference;

a second processor that selects video based on the analyzed data;

a memory, operably connected to the second processor, wherein the video is stored; and

a transmitter, operably connected to the memory that transmits the selected video to the subscriber.

Claim 115. (Withdrawn) The apparatus of claim 112, wherein the video is television programming.

Claim 116. (Withdrawn) The apparatus of claim 112, wherein the video is advertisements.

Claim 117. (Currently Amended) A system for gathering data related to television programming displayed on a television, comprising:

a remote site that provides the television programming;

a terminal operably coupled to the remote site and the terminal, the terminal receiving the television programming and sending television programming to the television; and

a control operably coupled to the terminal, wherein the control is usable to enter commands and the terminal receives the commands, and wherein the terminal further comprises:

a processor that processes the commands to produce program access information,

and

a memory operably coupled to the processor that stores the program access information; and

wherein the processor processes the program access information into a programs watched matrix, the programs watched matrix arranged by program categories and a time and a date of viewing, and the memory stores the programs watched matrix.

Claim 118. (Original) The system of claim 117, wherein the remote site is one of a cable television headend and an operations center.

Claim 119. (Original) The system of claim 117, wherein the terminal transmits the program access information to the remote site using one of a telephone modem, a wireless telephone, and a cable modem.

Claim 120. (Original) The system of claim 119, wherein the remote site comprises:

a receiver that receives the program access information;

a second processor coupled to the receiver that processes the program access information;
and

a database coupled to the second processor that stores the processed program access information.

Claims 121-122. (cancelled)

Claim 123. (Original) The system of claim ~~122~~120, wherein the terminal is assigned a unique identification number, and wherein the program access information in the database is arranged in tables related by the unique identification number.

Claim 124. (Currently amended) The system of claim 117, ~~wherein the processor processes the program access information into a programs watched matrix, the programs watched matrix arranged by program categories and a time and a date of viewing, and the memory stores the programs watched matrix, and wherein the terminal transmits the programs watched matrix to the remote site using one of a telephone modem, a wireless telephone, and a cable modem.~~

Claim 125. (Original) The system of claim 117, wherein the control is one of an infra red control and a radio frequency control.

Claim 126. (Original) The system of claim 117, wherein the television programming includes one of advertisements, promotions, infomercials and television programs.

Claim 127. (Currently Amended) A method for gathering data related to television programming, comprising:

transmitting the programming from a remote site to a terminal coupled to the remote site;
receiving the programming on the terminal;
displaying the programming on a television coupled to the terminal;
sending control signals from a control to the terminal to control the display of the programming;
receiving the control signals in the terminal;
processing the control signals in the terminal to produce program access information; and
storing the program access information receiving the program access information in a receiver at the remote site;
processing the program access information; and
storing the processed program access information.

wherein the processed program access information includes programs watched data processed into a program watched matrix.

Claim 128. (Original) The method of claim 127, wherein the remote site is one of a cable television headend and an operations center.

Claim 129. (Original) The method of claim 127, wherein the terminal transmits the program access information to the remote site using one of a telephone modem, a wireless telephone and a cable modem.

Claim 130. (Cancelled)

Claim 131. (Currently Amended) The method of claim 130, wherein ~~the program access information includes programs watched data~~, the programs watched data including a program title and a time and date of viewing.

Claim 132. (Currently Amended) The method of claim 131, ~~further comprising: processing the programs watched data into a programs watched matrix; wherein~~ the programs watched matrix is arranged by program categories and a time and a date of viewing; ~~and storing the programs watched matrix.~~

Claim 133. (Original) The method of claim 132, further comprising:
assigning the terminal a unique identification number; and
arranging the program access information in tables in a database, the tables related by the unique identification number.

Claim 134. (Original) The method of claim 127, wherein the processor processes the program access information into a programs watched matrix, the programs watched matrix arranged by program categories and a time and a date of viewing, and the memory stores the programs watched matrix, and wherein the terminal transmits the programs watched matrix to the remote site using one of a telephone modem, a wireless telephone and a cable modem.

Claim 135. (Original) The method of claim 127, wherein the control is one of an infrared control and a radio frequency control.

Claim 136. (Original) The method of claim 127, wherein the television programming includes one of advertisements, promotions, infomercials and television programs.

Claim 137. (New) An apparatus that gathers programs watched data, comprising:

a plurality of terminals connected to corresponding televisions and to a television program delivery system, each of the terminals including a memory that stores program access information; and

a receiver coupled to the plurality of terminals, the receiver receiving the program access information, wherein the program access information is stored as programs watched data, wherein the programs watched data is stored in a programs watched matrix and is recorded as counts, the counts corresponding to the number of times a program category is watched at the associated terminal, wherein each of the associated terminals is assigned a unique programs watched matrix, and wherein the unique programs watched matrix is updated as additional program access information is provided by the associated terminal.

Claim 138. (New) An apparatus that gathers programs watched data, comprising:

a plurality of terminals connected to corresponding televisions and to a television program delivery system, each of the terminals including a memory that stores program access information;

a receiver coupled to the plurality of terminals, the receiver receiving the program access information, wherein the program access information is stored as programs watched data; and

a plurality of databases, wherein each of the plurality of databases receives information from programs watched matrices, the information including the terminal address, group identifier, and program counts, the databases including one or more of viewer profile, account billing, program scheduling and advertisement scheduling databases.

Claim 139. (New) An apparatus that gathers programs watched data, comprising:

a plurality of terminals connected to corresponding televisions and to a television program delivery system, each of the terminals including a memory that stores program access information;

a receiver coupled to the plurality of terminals, the receiver receiving the program access information, wherein the program access information is stored as programs watched data; and

a controller in the television program delivery system, the controller coupled to the plurality of terminals, the controller issuing a message directing each of the terminals to provide the program access information, wherein the message is a polling request message, the polling request message sent over one of a cable television cable and a telephone line and a response message is returned over one of the cable television cable and the telephone line, and wherein the

program access information is provided in the response message, the response message including:

a leading flag;

an address field including the address of the terminal;

a subscriber region designation that includes a geographical region in which the terminal is located;

a terminal identifier that uniquely identifies the terminal;

an information field that includes a command to provide the program access information;

and

a trailing flag.
